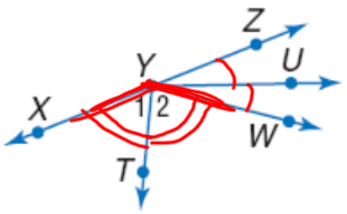
1-4 HW

ALGEBRA In the figure, $\overrightarrow{YX}$ and $\overrightarrow{YZ}$ are opposite rays. $\overrightarrow{YU}$ bisects $\angle ZYW$, and $\overrightarrow{YT}$ bisects $\angle XYW$.



34. If $m\angle ZYU = 8p - 10$ and $m\angle UYW = 10p - 20$, find $m\angle ZYU$. 30

35. If $m\angle 1 = 5x + 10$ and $m\angle 2 = 8x - 23$, find $m\angle 2$.

36. If $m\angle 1 = y$ and $m\angle XYW = 6y - 24$, find y.

34. $8p - 10 = 10p - 20$

$10 = 2p$

$5 = p$

36. $m\angle 1 = m\angle XYW$ $y = \frac{1}{2}(6y - 24)$

$2y = 6y - 24$

$-4y = -24$

$y = 6$

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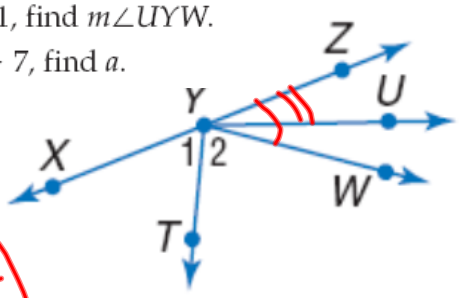
1-4 HW

37. If $m\angle WYZ = 82$ and $m\angle ZYU = 4r + 25$, find r.

38. If $m\angle WYX = 2(12b + 7)$ and $m\angle ZYU = 9b - 1$, find $m\angle UYW$.

39. If $\angle ZYW$ is a right angle and $m\angle ZYU = 13a - 7$, find a.



$m\angle WYZ = 2\,m\angle ZYU$

$82 = 2(4r + 25)$

$82 = 8r + 50$

$32 = 8r$

$4 = r$

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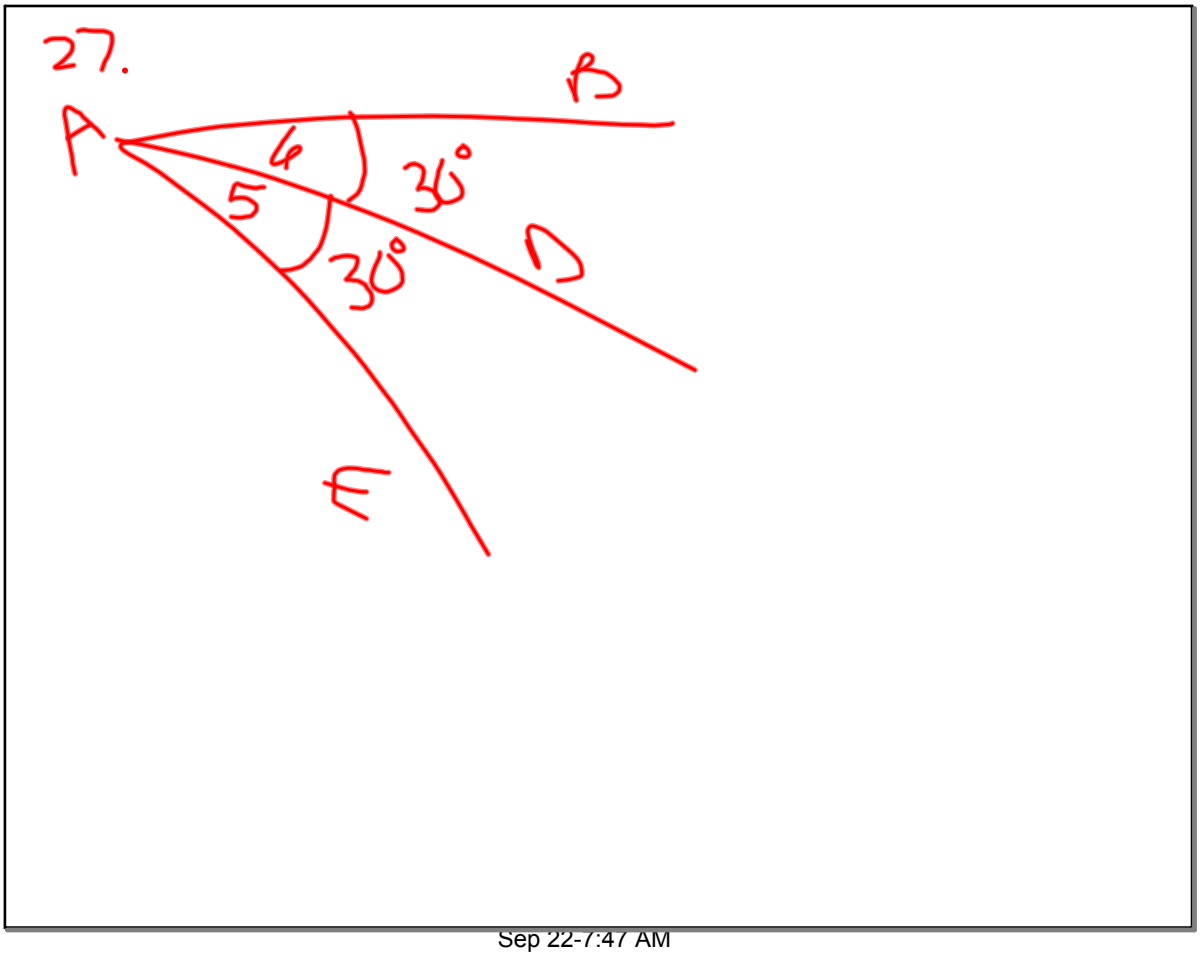

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1-5 Angle Relationships

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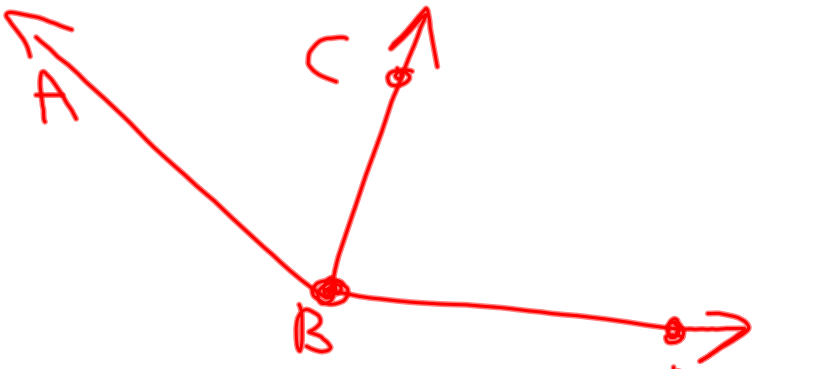
Adjacent angles—2 ∠s that lie in the same plane, have a common vertex, and a common side, but no common interior points



∠ABC + ∠CBD are adjacent

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Vertical angles—2 nonadjacent ∠s formed by intersecting lines

∠BCA + ∠ECD

∠BCE + ∠ACD

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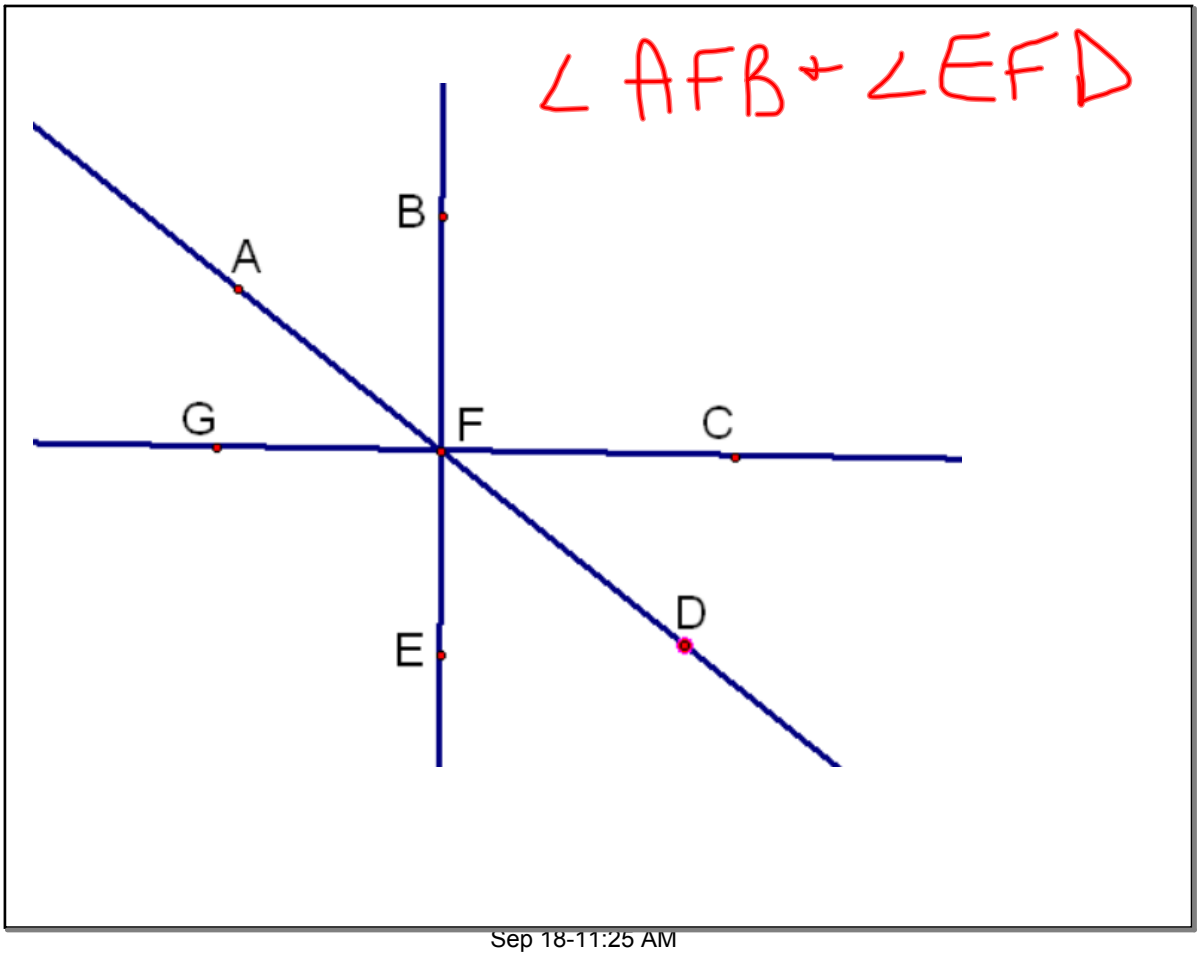

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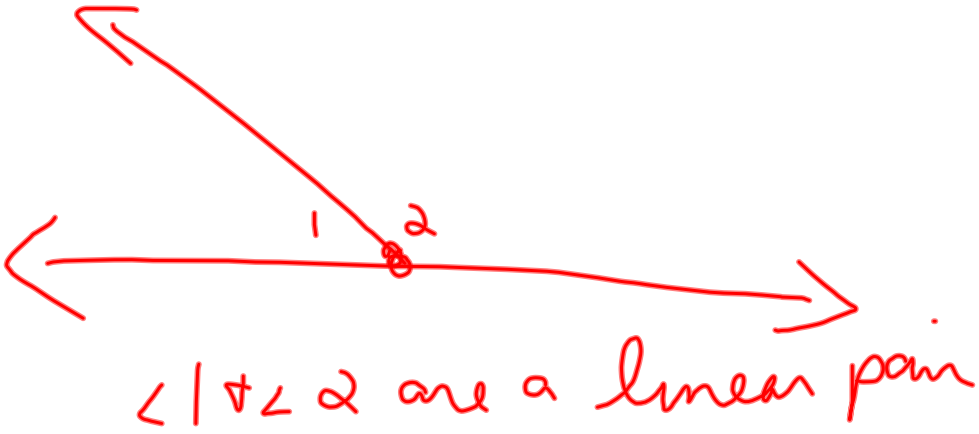
Linear pair—a pair of adjacent ∠s whose non-common sides are opposite rays



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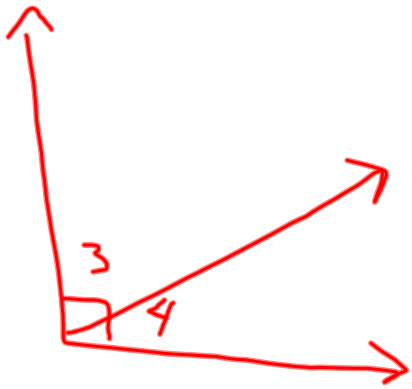
Complementary angles—2 ∠s whose measures have a sum of 90°



$m\angle 3 + m\angle 4 = 90$

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Supplementary angles—2 ∠s whose measures have a sum of 180°

$m\angle 5 + m\angle 6 = 180$

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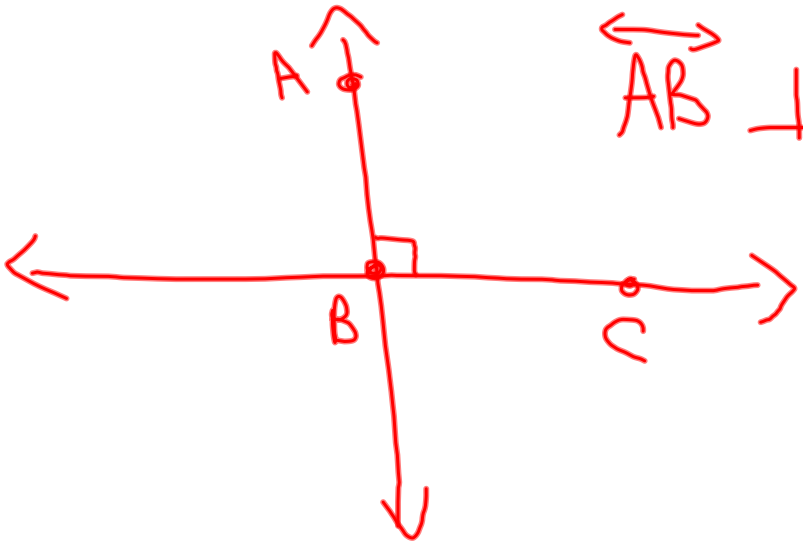
Perpendicular lines—lines that form right ∠s; form congruent adjacent ∠s (⊥)



$\overleftrightarrow{AB} \perp \overleftrightarrow{BC}$

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Example 1

An angle is 6° less than twice its complement. Find the angles.

$x + y = 90$

$x = 2y - 6$

$2y - 6 + y = 90$

$3y = 96$

$y = 32$

$x = 58$

$y = 32$

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Example 2
An angle is 44° more than its supplement. Find the angles.

$x + y = 180$

$x = y + 44$

68°, 112°

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Example 3 Two angles are complementary.
An angle is 17 times as large as the other. Find the angles.

$x + y = 90$

$x = 17y$

$17y + y = 90$

$18y = 90$

$y = 5$

$x = 85$

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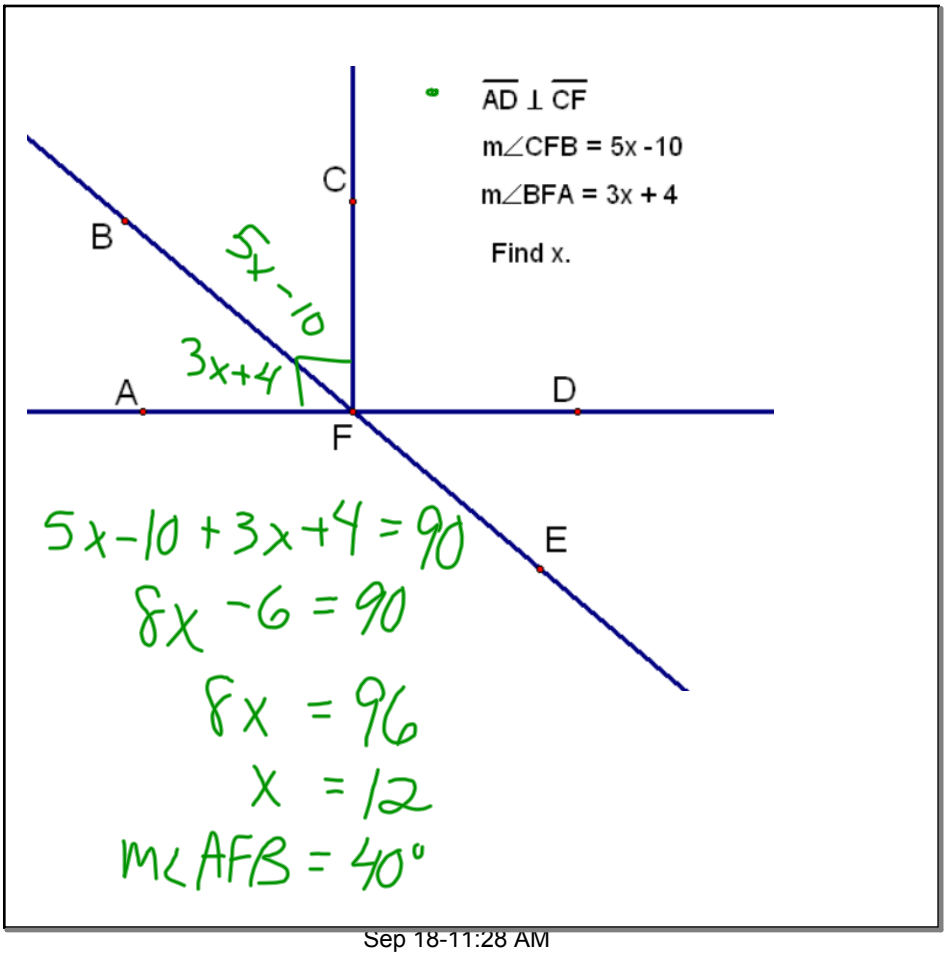

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HW

p42 #s 11-28

Tomorrow: Bring PSAT booklets to class

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